

What is claimed is:

1. An objective lens for an optical pick-up, at least one surface of said objective lens being an aspherical surface, said at least one surface being divided into an effective area and an outer area outside said effective area, said effective area and said outer area being formed such that a predetermined gap is caused between a spherical aberration of a light beam passed through said effective area and a spherical aberration of a light beam passed through said outer area, a diffraction lens structure being formed on said at least one surface within said effective area, said outer area being connected with a base curve which is a macroscopic shape of said at least one surface within said effective area, the light beam passed through said effective area forming a beam spot on a predetermined surface, the light beam passed through said outer area being diffused on the predetermined surface in comparison with the beam spot.

2. The objective lens according to claim 1, said diffraction lens structure including a plurality of concentric annular zones formed on said at least one surface.

3. The objective lens according to claim 2, wherein an absolute value of said gap is equal to or greater than 10 micrometers.

4. The objective lens according to claim 3, wherein an absolute value of said gap is approximately 200 micrometers.

5. The objective lens according to claim 1, wherein said at least one surface in said outer area is a continuous surface having no diffraction lens structure.

6. An objective lens for an optical pick-up, at least one surface of said objective lens being an aspherical surface, said at least one surface being divided into an effective area and an outer area outside said effective area, a diffraction lens structure being formed on said at least one surface within said effective area, said outer area being connected with a base curve which is a macroscopic shape of said at least one surface within said effective area, said effective area and said outer area being formed such that the light beam passed through said effective area forming a beam spot on a predetermined surface, the light beam passed through said outer area being diffused on the predetermined surface.

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